

110
120
130
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160
170
180
190
200

[illegible]

gatatattct	ctgtatttgt	tgggtggaatg	agtttggggg	aattctttctc	gaattctggg	1140
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acattacttc	ctaaaggcta	cgacacacag	gttggagaaa	gtggtgttca	actctcaggt	1680
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gacagagtca	tgggtggggag	gaccaactgt	gttctgctc	actgctctg	ccacctcaga	1860
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ctgcraanga	aatcaactcag	tttaagatca	ggaagtctga	ggaatctgag	ctattcttca	2100
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tctggctctg	aggctttaat	ctctcgggtat	ggtgctccac	ttgtgagtta	aggcgctgtca	3000
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gctatggctt	tcagggactc	taacctcaga	attcgaigtct	gacatagcca	agctcttgtg	3300
gtgcgagatg	gtgcagggaa	cagctctgtta	attcgaatga	tcagagcgtt	ctaacgactt	3360
ctgcctggaa	agctcaggat	tgatgggaaa	gattctggct	ggttaaacct	gaattctctta	3420
aggtcaaaa	tgggtcttgg	tcacaaagaa	caggctcttt	tcaggcaat	gattctgaa	3480
actctgcttt	tgttaaaaga	tggtggaact	gattctgaa	taattgatga	agcttgagtc	3540
caaatgcttc	agggtcttat	agtggttcta	cttgaaaggt	caaaactctc	gttagggtaa	3600
caaatgcttc	ttttatttgg	tgacaaaaa	caaaactctg	caatacgaag	agctgtgttc	3660
agaacactta	cagtgttgtt	cttagacgaa	gaaactagcg	cactagatgg	agaatcagaa	3720
tgcgtgctgc	aagagggtt	agagaggctc	atgagaggtc	ggacacccgt	ggtagtctgt	3780
cacccgttgt	ccaccaaagg	agggttgtat	tgcatttgtg	tgattcaaga	cgggcggatt	3840
gtggagcaag	ggagccattc	agagctcgtt	agccgacag	agggagctta	ttcaaggctg	3900
ctacagcttc	aaacacatag	gatttgaacg	ttcaatctatg	attaaaaaca	aaaatccggt	3960
ctgtataatt	tttttatat	taaaatttta	atttgaagaa	ttttcttga	tttttaagat	4020

Met	Ser	Glu	Thr	Asn	Thr	Thr	Asp	Ala	Lys	Thr	Val	Pro	Ala	Glu	Ala
1				5					10					15	
Glu	Lys	Lys	Lys	Glu	Gln	Ser	Leu	Pro	Phe	Phe	Lys	Leu	Phe	Ser	Phe
			20					25					30		
Ala	Asp	Lys	Phe	Asp	Tyr	Leu	Leu	Met	Phe	Val	Gly	Ser	Leu	Gly	Ala
		35					40					45			
Ile	Val	His	Gly	Ser	Ser	Met	Pro	Val	Phe	Phe	Leu	Phe	Gly	Gln	
	50					55					60				
Met	Val	Asn	Gly	Phe	Gly	Lys	Asn	Gln	Met	Asp	Leu	His	Gln	Met	Val
65					70					75				80	
His	Glu	Val	Ser	Arg	Tyr	Ser	Leu	Tyr	Phe	Val	Tyr	Leu	Gly	Leu	Val
				85					90				95		
Val	Cys	Phe	Ser	Ser	Tyr	Ala	Glu	Ile	Ala	Cys	Trp	Met	Tyr	Ser	Gly
			100					105					110		
Glu	Arg	Gln	Val	Ala	Ala	Leu	Arg	Lys	Lys	Tyr	Leu	Glu	Ala	Val	Leu
		115					120					125			
Lys	Gln	Asp	Val	Gly	Phe	Phe	Asp	Thr	Asp	Ala	Arg	Thr	Gly	Asp	Ile
	130						135				140				
Val	Phe	Ser	Val	Ser	Thr	Asp	Thr	Leu	Leu	Val	Gln	Asp	Ala	Ile	Ser
145					150					155				160	
Glu	Lys	Val	Gly	Asn	Phe	Ile	His	Tyr	Leu	Ser	Thr	Phe	Leu	Ala	Gly
				165				170					175		
Leu	Val	Val	Gly	Phe	Val	Ser	Ala	Trp	Lys	Leu	Ala	Leu	Leu	Ser	Val
		180						185				190			
Ala	Val	Ile	Pro	Gly	Ile	Ala	Phe	Ala	Gly	Gly	Leu	Tyr	Ala	Tyr	Thr
	195						200					205			
Leu	Thr	Gly	Ile	Thr	Ser	Lys	Ser	Arg	Glu	Ser	Tyr	Ala	Asn	Ala	Gly
	210					215					220				
Val	Ile	Ala	Glu	Gln	Ala	Ile	Ala	Gln	Val	Arg	Thr	Val	Tyr	Ser	Tyr
225				230				235						240	
Val	Gly	Glu	Ser	Lys	Ala	Leu	Asn	Ala	Tyr	Ser	Asp	Ala	Ile	Gln	Tyr
			245					250					255		
Thr	Leu	Lys	Leu	Gly	Tyr	Lys	Ala	Gly	Met	Ala	Lys	Gly	Leu	Gly	Leu
		260						265				270			
Gly	Cys	Thr	Tyr	Gly	Ile	Ala	Cys	Met	Ser	Trp	Ala	Leu	Val	Phe	Trp
	275					280						285			
Tyr	Ala	Gly	Val	Phe	Ile	Arg	Asn	Gly	Gln	Thr	Asp	Gly	Gly	Lys	Ala
	290					295					300				
Ile	Thr	Ala	Ile	Ile	Ser	Ala	Ile	Val	Gly	Gly	Met	Ser	Leu	Gly	Gln
305														310	
Asn	Ile	Ser	Asn	Leu	Gly	Ala	Ile	Gln	Lys	Gly	Lys	Ala	Ala	Gly	Tyr
			315											320	
Lys	Leu	Met	Gln	Ile	Ile	Asn	Gln	Arg	Pro	Thr	Ile	Ile	Gln	Asp	Pro
		325						330					335		
Leu	Asp	Gly	Lys	Cys	Leu	Asp	Gln	Val	His	Gly	Asn	Ile	Glu	Phe	Lys
	340						345					350			
Asp	Val	Thr	Phe	Ser	Tyr	Pro	Ser	Arg	Pro	Asp	Val	Met	Ile	Phe	Arg
	355					360					365				
Asn	Ile	Asn	Ile	Ile	Ile	Ile	Pro	Gly	Lys	Thr	Val	Ala	Val	Val	Gly
370				375										380	

Met Thr Ala Leu Phe Ala Thr Thr Leu Val Thr Asn Ile Leu Tyr Glu

450		455		460	
Lys	Pro	Asp	Ala	Thr	Met
465		470		475	480
Asn	Ala	His	Ser	Phe	Ile
		485		490	495
Val	Gly	Glu	Arg	Gly	Val
	500			505	510
Ala	Ile	Ala	Arg	Ala	Met
	515			520	525
Glu	Ala	Thr	Ser	Ala	Leu
	530			535	540
Ala	Leu	Asp	Arg	Val	Met
545		550		555	560
Arg	Leu	Cys	Thr	Ile	Arg
		565		570	575
Gly	Gln	Val	Val	Glu	Thr
	580			585	590
Gly	Ala	Tyr	Ala	Ser	Leu
	595			600	605
Asp	Phe	Ser	Asn	Pro	Ser
610				615	620
His	Ser	Leu	Ser	Thr	Lys
625				630	635
Asn	Leu	Ser	Tyr	Ser	Thr
		645		650	655
Ile	Ser	Asn	Ala	Glu	Thr
	660			665	670
Phe	Tyr	Arg	Leu	Leu	Lys
	675			680	685
Met	Gly	Ala	Val	Gly	Ser
	690			695	700
Ala	Ile	Val	Met	Ser	Asn
705				710	715
Asp	Ser	Met	Glu	Arg	Lys
		725		730	735
Ala	Gly	Leu	Tyr	Ala	Val
	740			745	750
Ser	Ile	Met	Gly	Glu	Asn
	755			760	765
Ser	Ala	Ile	Leu	Arg	Asn
	770			775	780
Asn	Ser	Leu	Leu	Ile	Ala
785				790	795
Lys	Ser	Ala	Ile	Ala	Glu
	805			810	815
Ser	Leu	Leu	Thr	Ser	Phe
	820			825	830
Ser	Leu	Leu	Ile	Leu	Ile
	835			840	845
Ala	Gln	Gln	Leu	Ser	Leu

Gln Thr Ser Gly Phe Leu Phe Gly Leu Ser Gln Leu Ala Leu Tyr Gly
 915 920 925
 Ser Glu Ala Leu Ile Leu Trp Tyr Gly Ala His Leu Val Ser Lys Gly
 930 935 940
 Val Ser Thr Phe Ser Lys Val Ile Lys Val Phe Val Val Leu Val Ile
 945 950 955 960
 Thr Ala Asn Ser Val Ala Glu Thr Val Ser Leu Ala Pro Glu Ile Ile
 965 970 975
 Arg Gly Gly Glu Ala Val Gly Ser Val Phe Ser Val Leu Asp Arg Gln
 980 985 990
 Thr Arg Ile Asp Pro Asp Asp Ala Asp Ala Asp Pro Val Glu Thr Ile
 995 1000 1005
 Arg Gly Asp Ile Glu Phe Arg His Val Asp Phe Ala Tyr Pro Ser Arg
 1010 1015 1020
 Pro Asp Val Met Val Phe Arg Asp Phe Asn Leu Arg Ile Arg Ala Gly
 1025 1030 1035 1040
 His Ser Gln Ala Leu Val Gly Ala Ser Gly Ser Gly Lys Ser Ser Val
 1045 1050 1055
 Ile Ala Met Ile Glu Arg Phe Tyr Asp Leu Leu Ala Gly Lys Val Met
 1060 1065 1070
 Ile Asp Gly Lys Asp Ile Arg Arg Leu Asn Leu Lys Ser Leu Arg Leu
 1075 1080 1085
 Lys Ile Gly Leu Val Gln Gln Glu Pro Ala Leu Phe Ala Ala Thr Ile
 1090 1095 1100
 Phe Asp Asn Ile Ala Tyr Gly Lys Asp Gly Ala Thr Glu Ser Glu Val
 1105 1110 1115 1120
 Ile Asp Ala Ala Arg Ala Ala Asn Ala His Gly Phe Ile Ser Gly Leu
 1125 1130 1135
 Pro Glu Gly Tyr Lys Thr Pro Val Gly Glu Arg Gly Val Gln Leu Ser
 1140 1145 1150
 Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala Val Leu Lys Asn
 1155 1160 1165
 Pro Thr Val Leu Leu Leu Asp Glu Ala Thr Ser Ala Leu Asp Ala Glu
 1170 1175 1180
 Ser Glu Cys Val Leu Gln Glu Ala Leu Glu Arg Leu Met Arg Gly Arg
 1185 1190 1195 1200
 Thr Thr Val Val Val Ala His Arg Leu Ser Thr Ile Arg Gly Val Asp
 1205 1210 1215
 Cys Ile Gly Val Ile Val Asp Gly Arg Ile Val Glu Gln Gly Ser His
 1220 1225 1230
 Ser Ala Leu Val Ser Asn Ile Ile Gly Ala Tyr Ser Ala Leu Leu Gln
 1235 1240 1245
 Leu Gln Thr His Arg Ile
 1250

42108-3

42118-1280

42112-PPT

42113-Hem. Mag. Lem.

The following information was obtained from the analysis of the above mentioned samples:

Phe	Lys	Leu	Asn	Asn	Lys	Ser	Glu	Lys	Asp	Lys	Lys	Glu	Lys	Lys	Pro
			20					25					30		
Thr	Val	Ser	Val	Phe	Ser	Met	Phe	Arg	Tyr	Ser	Asn	Trp	Leu	Asp	Lys
		35					40					45			
Leu	Tyr	Met	Val	Val	Gly	Thr	Leu	Ala	Ala	Ile	Ile	His	Gly	Ala	Gly
	50					55					60				
Leu	Pro	Leu	Met	Met	Leu	Val	Phe	Gly	Glu	Met	Thr	Asp	Ile	Phe	Ala
65					70					75					80
Asn	Ala	Gly	Asn	Leu	Glu	Asp	Leu	Met	Ser	Asn	Ile	Thr	Asn	Arg	Ser
			85						90					95	
Asp	Ile	Asn	Asp	Thr	Gly	Phe	Phe	Met	Asn	Leu	Glu	Glu	Asp	Met	Thr
			100					105					110		
Arg	Tyr	Ala	Tyr	Tyr	Tyr	Ser	Gly	Ile	Gly	Ala	Gly	Val	Leu	Val	Ala
		115					120						125		
Ala	Tyr	Ile	Gln	Val	Ser	Phe	Trp	Cys	Leu	Ala	Ala	Gly	Arg	Gln	Ile
	130					135					140				
His	Lys	Ile	Arg	Lys	Gln	Phe	Phe	His	Ala	Ile	Met	Arg	Gln	Glu	Ile
145					150					155					160
Gly	Trp	Phe	Asp	Val	His	Asp	Val	Gly	Glu	Leu	Asn	Thr	Arg	Leu	Thr
			165					170						175	
Asp	Asp	Val	Ser	Lys	Ile	Asn	Glu	Val	Ile	Gly	Asp	Lys	Ile	Gly	Met
		180					185						190		
Phe	Phe	Gln	Ser	Met	Ala	Thr	Phe	Phe	Thr	Gly	Phe	Ile	Val	Gly	Phe
	195						200					205			
Thr	Arg	Gly	Trp	Lys	Leu	Thr	Leu	Val	Ile	Leu	Ala	Ile	Ser	Pro	Val
	210					215					220				
Leu	Gly	Leu	Ser	Ala	Ala	Val	Trp	Ala	Lys	Ile	Leu	Ser	Ser	Phe	Thr
225					230					235					240
Asp	Lys	Glu	Leu	Leu	Ala	Tyr	Ala	Lys	Ala	Gly	Ala	Val	Ala	Glu	Glu
			245					250						255	
Val	Leu	Ala	Ala	Ile	Arg	Thr	Val	Ile	Ala	Phe	Gly	Gly	Gln	Lys	Lys
		260					265						270		
Glu	Leu	Glu	Arg	Tyr	Asn	Lys	Asn	Leu	Glu	Glu	Ala	Lys	Arg	Ile	Gly
	275					280					285				
Ile	Lys	Lys	Ala	Ile	Thr	Ala	Asn	Ile	Ser	Ile	Gly	Ala	Ala	Phe	Leu
	290				295						300				
Leu	Ile	Tyr	Ala	Ser	Tyr	Ala	Leu	Ala	Phe	Trp	Tyr	Gly	Thr	Thr	Leu
305					310					315					320
Val	Leu	Ser	Gly	Glu	Tyr	Ser	Ile	Gly	Gln	Val	Leu	Thr	Val	Phe	Phe
			325					330						335	
Pro	Val	Leu	Ile	Gly	Ala	Phe	Ser	Val	Gly	Ile	Ala	Ser	Ile	Ser	Ile
	340							345					350		
His	Ala	Phe	Ala	Asn	Ala	Arg	Gly	Ala	Ala	Tyr	Ala	Ile	Ile	Lys	Ile
	355						360					365			
Ile	Asp	Asn	Lys	Pro	Ser	Ile	Asp	Ser	Tyr	Ser	Lys	Ser	Gly	His	Lys
	370					375					380				
Pro	Asp	Asn	Ile	Lys	Gly	Asn	Leu	Glu	Phe	Arg	Asn	Val	His	Phe	Ser
	385				390					395					400
Tyr	Pro	Ser	Arg	Lys	Ala	Val	Lys	Ile	Leu	Lys	Arg	Leu	Asn	Leu	Lys
			405					410						415	

1
 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500

465 470 475 480
 Ala Thr Thr Ile Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asn Val Thr
 485 490 495
 Met Asp Glu Ile Glu Lys Ala Val Lys Glu Ala Asn Ala Tyr Asp Phe
 500 505 510
 Ile Met Lys Leu Pro His Lys Phe Asp Thr Leu Val Gly Glu Arg Gly
 515 520 525
 Ala Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala
 530 535 540
 Leu Val Arg Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala
 545 550 555 560
 Leu Asp Thr Glu Ser Glu Ala Val Val Gln Val Ala Leu Asp Lys Ala
 565 570 575
 Arg Lys Gly Arg Thr Thr Ile Val Ile Ala His Arg Leu Ser Thr Val
 580 585 590
 Arg Asn Ala Asp Val Ile Ala Gly Phe Asp Asp Gly Val Ile Val Glu
 595 600 605
 Lys Gly Asn His Asp Glu Leu Met Lys Glu Lys Gly Ile Tyr Phe Lys
 610 615 620
 Leu Val Thr Met Gln Thr Ala Gly Asn Glu Val Glu Leu Glu Asn Ala
 625 630 635 640
 Ala Asp Glu Ser Lys Ser Glu Ile Asp Ala Leu Glu Met Ser Ser Asn
 645 650 655
 Asp Ser Arg Ser Ser Leu Ile Arg Lys Arg Ser Thr Arg Arg Ser Val
 660 665 670
 Arg Gly Ser Gln Ala Gln Asp Arg Lys Leu Ser Thr Lys Glu Ala Leu
 675 680 685
 Asp Glu Ser Ile Pro Pro Val Ser Phe Trp Arg Ile Met Lys Leu Asn
 690 695 700
 Leu Thr Glu Trp Pro Tyr Phe Val Val Gly Val Phe Cys Ala Ile Ile
 705 710 715 720
 Asn Gly Gly Leu Gln Pro Ala Phe Ala Ile Ile Phe Ser Lys Ile Ile
 725 730 735
 Gly Val Phe Thr Arg Ile Asp Asp Pro Glu Thr Lys Arg Gln Asn Ser
 740 745 750
 Asn Leu Phe Ser Leu Leu Phe Leu Ala Leu Gly Ile Ile Ser Phe Ile
 755 760 765
 Thr Phe Phe Leu Gln Gly Phe Thr Phe Gly Lys Ala Gly Glu Ile Leu
 770 775 780
 Thr Lys Arg Leu Arg Tyr Met Val Ile Ala Glu Met Leu Arg Ala Asp
 785 790 795 800
 Val Ser Trp Ile Asp Arg Leu Lys Asn Ile Thr Lys Ala Leu Thr Thr
 805 810 815
 Arg Leu Ala Asn Asp Ala Ala Gln Val Lys Gly Ala Ile Gly Ser Arg
 820 825 830
 Leu Ala Val Ile Thr Gln Asn Ile Ala Asn Leu Gly Thr Gly Ile Ile
 835 840 845
 Ile Ser Phe Ile Tyr Gly Thr Gln Leu Thr Leu Leu Leu Leu Ala Ile
 850 855 860
 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr

Arg Asn Ser Leu Arg Lys Ala His Ile Phe Gly Ile Thr Phe Ser Phe
 930 935 940
 Thr Gln Ala Met Met Tyr Phe Ser Tyr Ala Gly Cys Phe Arg Phe Gly
 945 950 955 960
 Ala Tyr Leu Val Ala His Lys Leu Met Ser Phe Glu Asp Val Leu Leu
 965 970 975
 Val Phe Ser Ala Val Val Phe Gly Ala Met Ala Val Gly Gln Val Ser
 980 985 990
 Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Ile Ser Ala Ala His Ile
 995 1000 1005
 Ile Met Ile Ile Glu Lys Thr Pro Leu Ile Asp Ser Tyr Ser Thr Glu
 1010 1015 1020
 Gly Leu Met Pro Asn Thr Leu Glu Gly Asn Val Thr Phe Gly Glu Val
 1025 1030 1035 1040
 Val Phe Asn Tyr Pro Thr Arg Pro Asp Ile Pro Val Leu Gln Gly Leu
 1045 1050 1055
 Ser Leu Glu Val Lys Lys Gly Gln Thr Leu Ala Leu Val Gly Ser Ser
 1060 1065 1070
 Gly Cys Gly Lys Ser Thr Val Val Gln Leu Leu Glu Arg Phe Tyr Asp
 1075 1080 1085
 Pro Leu Ala Gly Lys Val Leu Leu Asp Gly Lys Glu Ile Lys Arg Leu
 1090 1095 1100
 Asn Val Gln Trp Leu Arg Ala His Leu Gly Ile Val Ser Gln Glu Pro
 1105 1110 1115 1120
 Ile Leu Phe Asp Cys Ser Ile Ala Glu Asn Ile Ala Tyr Gly Asp Asn
 1125 1130 1135
 Ser Arg Val Val Ser Gln Glu Glu Ile Val Arg Ala Ala Lys Glu Ala
 1140 1145 1150
 Asn Ile His Ala Phe Ile Glu Ser Leu Pro Asn Lys Tyr Ser Thr Lys
 1155 1160 1165
 Val Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile
 1170 1175 1180
 Ala Ile Ala Arg Ala Leu Val Arg Gln Pro His Ile Leu Leu Leu Asp
 1185 1190 1195 1200
 Glu Ala Thr Ser Ala Leu Asp Thr Glu Ser Glu Lys Val Val Gln Glu
 1205 1210 1215
 Ala Leu Asp Lys Ala Arg Glu Gly Arg Thr Cys Ile Val Ile Ala His
 1220 1225 1230
 Arg Leu Ser Thr Ile Gln Asn Ala Arg Leu Ile Val Val Phe Gln Asn
 1235 1240 1245
 Gly Arg Val Lys Ala His Gly Thr His Gln Ala Leu Ala Gln Lys
 1250 1255 1260
 Gly Ile Tyr Phe Ser Met Val Ser Val Gln Ala Gly Thr Lys Arg Gln
 1265 1270 1275 1280

1210-4

1211-1175

1212-1187

1213-1188

Thr Gly Ile Gly Ala Gly Val Leu Ile Val Ala Tyr Ile Gln Val Ser
 20 25 30
 Leu Trp Cys Leu Ala Ala Gly Arg Gln Ile His Lys Ile Arg Gln Lys
 35 40 45
 Phe Phe His Ala Ile Met Asn Gln Glu Ile Gly Trp Phe Asp Val His
 50 55 60
 Asp Val Gly Glu Leu Asn Thr Arg Leu Thr Asp Asp Val Ser Lys Ile
 65 70 75 80
 Asn Asp Gly Ile Gly Asp Lys Ile Gly Met Phe Phe Gln Ser Ile Thr
 85 90 95
 Thr Phe Leu Ala Gly Phe Ile Ile Gly Phe Ile Ser Gly Trp Lys Leu
 100 105 110
 Thr Leu Val Ile Leu Ala Val Ser Pro Leu Ile Gly Leu Ser Ser Ala
 115 120 125
 Leu Trp Ala Lys Val Leu Thr Ser Phe Thr Asn Lys Glu Leu Gln Ala
 130 135 140
 Tyr Ala Lys Ala Gly Ala Val Ala Glu Glu Val Leu Ala Ala Ile Arg
 145 150 155 160
 Thr Val Ile Ala Phe Gly Gly Gln Gln Lys Glu Leu Glu Arg Tyr Asn
 165 170 175
 Lys Asn Leu Glu Glu Ala Lys Asn Val Gly Ile Lys Lys Ala Ile Thr
 180 185 190
 Ala Ser Ile Ser Ile Gly Ile Ala Tyr Leu Leu Val Tyr Ala Ser Tyr
 195 200 205
 Ala Leu Ala Phe Trp Tyr Gly Thr Ser Leu Val Leu Ser Asn Glu Tyr
 210 215 220
 Ser Ile Gly Glu Val Leu Thr Val Phe Phe Ser Ile Leu Leu Gly Thr
 225 230 235 240
 Phe Ser Ile Gly His Leu Ala Pro Asn Ile Glu Ala Phe Ala Asn Ala
 245 250 255
 Arg Gly Ala Ala Phe Glu Ile Phe Lys Ile Ile Asp Asn Glu Pro Ser
 260 265 270
 Ile Asp Ser Phe Ser Thr Lys Gly Tyr Lys Pro Asp Ser Ile Met Gly
 275 280 285
 Asn Leu Glu Phe Lys Asn Val His Phe Asn Tyr Pro Ser Arg Ser Glu
 290 295 300
 Val Gln Ile Leu Lys Gly Leu Asn Leu Lys Val Lys Ser Gly Gln Thr
 305 310 315 320
 Val Ala Leu Val Gly Asn Ser Gly Cys Gly Lys Ser Thr Thr Val Gln
 325 330 335
 Leu Met Val Arg Leu Tyr Asp Pro Leu Ala Gly Val Val Ser Ile Asp
 340 345 350
 Gly Gln Asp Ile Arg Thr Ile Asn Val Arg Tyr Leu Arg Glu Ile Ile
 355 360 365
 Gly Val Val Ser Gln Glu Pro Val Leu Phe Ala Thr Thr Ile Ala Glu
 370 375 380
 Asn Ile Arg Tyr Gly Arg Glu Asp Val Thr Met Asp Glu Ile Glu Lys
 385 390 395 400
 Ala Val Lys Val Ala Asn Ala Tyr Arg Phe Ile Met Lys Leu Ile His
 405 410 415

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465	Ile	Val	Ile	Ala	His	Arg	Leu	Ser	Thr	Val	Arg	Asn	Ala	Asp	Val	Ile	480
					485					490						495	
Ala	Gly	Phe	Asp	Gly	Gly	Val	Ile	Val	Glu	Gln	Gly	Asn	His	Asp	Glu		
			500					505					510				
Leu	Met	Arg	Glu	Lys	Gly	Ile	Tyr	Phe	Lys	Leu	Val	Met	Thr	Gln	Thr		
		515					520					525					
Arg	Gly	Asn	Glu	Ile	Glu	Pro	Gly	Asn	Asn	Ala	Tyr	Gly	Ser	Gln	Ser		
	530					535					540						
Asp	Thr	Asp	Ala	Ser	Glu	Leu	Thr	Ser	Glu	Glu	Ser	Lys	Ser	Pro	Leu		
545					550					555					560		
Ile	Arg	Arg	Ser	Ile	Tyr	Arg	Ser	Val	His	Arg	Lys	Gln	Asp	Gln	Glu		
				565					570						575		
Arg	Arg	Leu	Ser	Met	Lys	Glu	Ala	Val	Asp	Glu	Asp	Val	Pro	Leu	Val		
			580					585					590				
Ser	Phe	Trp	Arg	Ile	Leu	Asn	Leu	Asn	Leu	Ser	Glu	Trp	Pro	Tyr	Leu		
		595				600						605					
Leu	Val	Gly	Val	Leu	Cys	Ala	Val	Ile	Asn	Gly	Cys	Ile	Gln	Pro	Val		
	610					615					620						
Phe	Ala	Ile	Val	Phe	Ser	Arg	Ile	Val	Gly	Val	Phe	Ser	Arg	Asp	Asp		
625					630					635					640		
Asp	His	Glu	Thr	Lys	Arg	Gln	Asn	Cys	Asn	Leu	Phe	Ser	Leu	Phe	Phe		
				645					650					655			
Leu	Val	Met	Gly	Leu	Ile	Ser	Phe	Val	Thr	Tyr	Phe	Phe	Gln	Gly	Phe		
			660					665					670				
Thr	Phe	Gly	Lys	Ala	Gly	Glu	Ile	Leu	Thr	Lys	Arg	Val	Arg	Tyr	Met		
		675				680						685					
Val	Phe	Lys	Ser	Met	Leu	Arg	Gln	Asp	Ile	Ser	Trp	Phe	Asp	Asp	His		
	690					695					700						
Lys	Asn	Ser	Thr	Gly	Ser	Leu	Thr	Thr	Arg	Leu	Ala	Ser	Asp	Ala	Ser		
705					710					715					720		
Ser	Val	Lys	Gly	Ala	Met	Gly	Ala	Arg	Leu	Ala	Val	Val	Thr	Gln	Asn		
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Val	Ala	Asn	Leu	Gly	Thr	Gly	Val	Ile	Leu	Ser	Leu	Val	Tyr	Gly	Trp		
		740						745					750				
Gln	Leu	Thr	Leu	Leu	Leu	Val	Val	Ile	Ile	Pro	Leu	Ile	Val	Leu	Gly		
		755				760						765					
Gly	Ile	Ile	Glu	Met	Lys	Leu	Leu	Ser	Gly	Gln	Ala	Leu	Lys	Asp	Lys		
	770					775					780						
Tyr	Ala	Leu	Arg	Thr	Phe	Gly	Tyr	Ile	Ala	Thr	Ala	Ala	Ile	Gln	Asn		
785					790					795							

Glu Gly Asn Val Lys Phe Asn Gly Val Gln Phe Asn Tyr Pro Thr Arg
 930 935 940
 Pro Asn Ile Pro Val Leu Gln Gly Leu Ser Leu Glu Val Lys Lys Gly
 945 950 955 960
 Gln Thr Leu Ala Leu Val Gly Ser Ser Gly Cys Gly Lys Ser Thr Val
 965 970 975
 Val Gln Leu Leu Glu Arg Phe Tyr Asp Pro Met Ala Gly Ser Val Phe
 980 985 990
 Leu Asp Gly Lys Glu Ile Lys Gln Leu Asn Val Gln Trp Leu Arg Ala
 995 1000 1005
 His Leu Gly Ile Val Ser Gln Glu Pro Ile Leu Phe Asp Cys Ser Ile
 1010 1015 1020
 Ala Glu Asn Ile Ala Tyr Gly Asp Asn Ser Arg Ala Val Ser His Glu
 1025 1030 1035 1040
 Glu Ile Val Arg Ala Ala Lys Glu Ala Asn Ile His Gln Phe Ile Asp
 1045 1050 1055
 Ser Leu Pro Asp Lys Tyr Asn Thr Arg Val Gly Asp Lys Gly Thr Gln
 1060 1065 1070
 Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala Leu Val
 1075 1080 1085
 Arg Gln Pro His Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala Leu Asp
 1090 1095 1100
 Thr Glu Ser Glu Lys Val Val Gln Glu Ala Leu Asp Lys Ala Arg Glu
 1105 1110 1115 1120
 Gly Arg Thr Cys Ile Val Ile Ala His Arg Leu Ser Thr Ile Gln Asn
 1125 1130 1135
 Ala Asp Leu Ile Val Val Ile Glu Asn Gly Lys Val Lys Glu His Gly
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 Thr His Gln Gln Leu Leu Ala Gln Lys Gly Ile Tyr Phe Ser Met Val
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 Gln Ala Gly Ala Lys Arg Ser
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 Ser Ala Ala Val Trp Ala Lys Ile Leu Ser Ala Phe Ser Asp Lys Glu
 20 25 30
 Leu Ala Ala Tyr Ala Lys Ala Gly Ala Val Ala Glu Glu Ala Leu Gly
 35 40 45
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...

Lys Glu Tyr Thr Ile Gly Asn Ala Met Thr Val Phe Phe Ser Ile Leu
 115 120 125
 Ile Gly Ala Phe Ser Val Gly Gln Ala Ala Pro Cys Ile Asp Ala Phe
 130 135 140
 Ala Asn Ala Arg Gly Ala Ala Tyr Val Ile Phe Asp Ile Ile Asp Asn
 145 150 155 160
 Asn Pro Lys Ile Asp Ser Phe Ser Glu Arg Gly His Lys Pro Asp Ser
 165 170 175
 Ile Lys Gly Asn Leu Glu Phe Asn Asp Val His Phe Ser Tyr Pro Ser
 180 185 190
 Arg Ala Asn Val Lys Ile Leu Lys Gly Leu Asn Leu Lys Val Gln Ser
 195 200 205
 Gly Gln Thr Val Ala Leu Val Gly Ser Ser Gly Cys Gly Lys Ser Thr
 210 215 220
 Thr Val Gln Leu Ile Gln Arg Leu Tyr Asp Pro Asp Glu Gly Thr Ile
 225 230 235 240
 Asn Ile Asp Gly Gln Asp Ile Arg Asn Phe Asn Val Asn Tyr Leu Arg
 245 250 255
 Glu Ile Ile Gly Val Val Ser Gln Glu Pro Val Leu Phe Ser Thr Thr
 260 265 270
 Ile Ala Glu Asn Ile Cys Tyr Gly Arg Gly Asn Val Thr Met Asp Glu
 275 280 285
 Ile Lys Lys Ala Val Lys Glu Ala Asn Ala Tyr Glu Phe Ile Met Lys
 290 295 300
 Leu Pro Gln Lys Phe Asp Thr Leu Val Gly Glu Arg Gly Ala Gln Leu
 305 310 315 320
 Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala Leu Val Arg
 325 330 335
 Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala Leu Asp Thr
 340 345 350
 Glu Ser Glu Ala Glu Val Gln Ala Ala Leu Asp Lys Ala Arg Glu Gly
 355 360 365
 Arg Thr Thr Ile Val Ile Ala His Arg Leu Ser Thr Val Arg Asn Ala
 370 375 380
 Asp Val Ile Ala Gly Phe Glu Asp Gly Val Ile Val Glu Gln Gly Ser
 385 390 395 400
 His Ser Glu Leu Met Lys Lys Glu Gly Val Tyr Phe Lys Leu Val Asn
 405 410 415
 Met Gln Thr Ser Gly Ser Val Ile Val Ser Gln Glu Phe Glu Leu Asn
 420 425 430
 Asp Gln Lys Ala Ala Thr Arg Met Ala Glu Asn Glu Tyr Lys Ser Ala
 435 440 445
 Leu Phe Ala His Ser Thr Gln Lys Asn Ser Lys Asn Ser Gln Met Cys
 450 455 460
 Gln Lys Ser Leu Asp Val Glu Thr Asp Gly Leu Glu Ala Asn Val Pro
 465 470 475 480
 Pro Val Ser Phe Leu Lys Val Leu Lys Leu Asn Lys Thr Glu Trp Pro
 485 490 495
 Tyr Phe Val Val Gly Thr Val Tyr Ala Ile Ala Asn Gly Gly Leu His
 500 505 510

The first 500 amino acids of the protein are shown. The sequence is identical to that of the

				565					570					575		
Met	Ala	Phe	Lys	Ala	Met	Leu	Arg	Gln	Asp	Met	Ser	Trp	Phe	Asp	Asp	
			580					585					590			
His	Lys	Asn	Ser	Thr	Gly	Ala	Leu	Ser	Thr	Arg	Leu	Ala	Thr	Asp	Ala	
		595					600					605				
Ala	Gln	Val	Gln	Gly	Ala	Thr	Gly	Thr	Arg	Leu	Ala	Leu	Ile	Ala	Gln	
		610				615					620					
Asn	Ile	Ala	Asn	Leu	Gly	Thr	Gly	Ile	Ile	Ile	Ser	Phe	Ile	Tyr	Gly	
625					630				635						640	
Trp	Gln	Leu	Thr	Leu	Leu	Leu	Leu	Ala	Val	Val	Pro	Ile	Ile	Ala	Val	
				645					650					655		
Ser	Gly	Ile	Val	Glu	Met	Lys	Leu	Leu	Ala	Gly	Asn	Ala	Lys	Arg	Asp	
			660					665					670			
Lys	Lys	Glu	Leu	Glu	Ala	Ala	Gly	Lys	Ile	Ala	Thr	Glu	Ala	Ile	Glu	
		675					680					685				
Asn	Ile	Arg	Thr	Val	Val	Ser	Leu	Thr	Gln	Glu	Arg	Lys	Phe	Glu	Ser	
		690				695					700					
Met	Tyr	Val	Glu	Lys	Leu	Tyr	Gly	Pro	Tyr	Arg	Asn	Ser	Val	Gln	Lys	
705					710					715					720	
Ala	His	Ile	Tyr	Gly	Ile	Thr	Phe	Ser	Ile	Ser	Gln	Ala	Phe	Met	Tyr	
				725					730					735		
Phe	Ser	Tyr	Ala	Gly	Cys	Phe	Arg	Phe	Gly	Ala	Tyr	Leu	Ile	Val	Asn	
			740					745					750			
Gly	His	Met	Arg	Phe	Arg	Asp	Val	Ile	Leu	Val	Phe	Ser	Ala	Ile	Val	
		755					760					765				
Phe	Gly	Ala	Val	Ala	Leu	Gly	His	Ala	Ser	Ser	Phe	Ala	Pro	Asp	Tyr	
		770				775					780					
Ala	Lys	Ala	Lys	Leu	Ser	Ala	Ala	His	Leu	Phe	Met	Leu	Phe	Glu	Arg	
785					790					795					800	
Gln	Pro	Leu	Ile	Asp	Ser	Tyr	Ser	Glu	Glu	Gly	Leu	Lys	Pro	Asp	Lys	
				805					810					815		
Phe	Glu	Gly	Asn	Ile	Thr	Phe	Asn	Glu	Val	Val	Phe	Asn	Tyr	Pro	Thr	
			820					825					830			
Arg	Ala	Asn	Val	Pro	Val	Leu	Gln	Gly	Leu	Ser	Leu	Glu	Val	Lys	Lys	
		835					840					845				
Gly	Gln	Thr	Leu	Ala	Leu	Val	Gly	Ser	Ser	Gly	Cys	Gly	Lys	Ser	Thr	
		850				855					860					
Val	Val	Gln	Leu	Leu	Glu	Arg	Phe	Tyr	Asp	Pro	Leu	Ala	Gly	Thr	Val	
865					870					875					880	
Leu	Leu	Asp	Gly	Phe	Ala	Ala	Lys	Lys	Leu	Asn	Val	Gln	Trp	Leu	Arg	
				885					890							

770		775		780
Gln Asp Met Ser Trp	Phe Asp Asp His Lys Asn Ser Thr Gly Ala Leu			
785	790	795	800	
Ser Thr Arg Leu Ala Thr Asp Ala Ala Gln Val Gln Gly Ala Thr Gly				
	805	810	815	
Thr Lys Leu Ala Leu Ile Ala Gln Asn Thr Ala Asn Leu Gly Thr Gly				
	820	825	830	
Ile Ile Ile Ser Phe Ile Tyr Gly Trp Gln Leu Thr Leu Leu Leu				
	835	840	845	
Ser Val Val Pro Phe Ile Ala Val Ala Gly Ile Val Glu Met Lys Met				
	850	855	860	
Leu Ala Gly Asn Ala Lys Arg Asp Lys Lys Glu Met Glu Ala Ala Gly				
865	870	875	880	
Lys Ile Ala Thr Glu Ala Ile Glu Asn Ile Arg Thr Val Val Ser Leu				
	885	890	895	
Thr Gln Glu Arg Lys Phe Glu Ser Met Tyr Val Glu Lys Leu His Gly				
	900	905	910	
Pro Tyr Arg Asn Ser Val Arg Lys Ala His Ile Tyr Gly Ile Thr Phe				
	915	920	925	
Ser Ile Ser Gln Ala Phe Met Tyr Phe Ser Tyr Ala Gly Cys Phe Arg				
	930	935	940	
Phe Gly Ser Tyr Leu Ile Val Asn Gly His Met Arg Phe Lys Asp Val				
945	950	955	960	
Ile Leu Val Phe Ser Ala Ile Val Leu Gly Ala Val Ala Leu Gly His				
	965	970	975	
Ala Ser Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Leu Ser Ala Ala				
	980	985	990	
Tyr Leu Phe Ser Leu Phe Glu Arg Gln Pro Leu Ile Asp Ser Tyr Ser				
	995	1000	1005	
Gly Glu Gly Leu Trp Pro Asp Lys Phe Glu Gly Ser Val Thr Phe Asn				
	1010	1015	1020	
Glu Val Val Phe Asn Tyr Pro Thr Arg Ala Asn Val Pro Val Leu Gln				
1025	1030	1035	1040	
Gly Leu Ser Leu Glu Val Lys Lys Gly Gln Thr Leu Ala Leu Val Gly				
	1045	1050	1055	
Ser Ser Gly Cys Gly Lys Ser Thr Val Val Gln Leu Leu Glu Arg Phe				
	1060	1065	1070	
Tyr Asp Pro Met Ala Gly Ser Val Leu Leu Asp Gly Gln Glu Ala Lys				
	1075	1080	1085	
Lys Leu Asp Thr Ala Gly Leu Arg Ala Gln Leu Lys Ile Val Ser Gln				
	1090	1095	1100	
Val Ile Ile Leu Phe Asp Tyr Ser Ile Ala Ala Asn Ile Ala Lys Gly				
1105	1110	1115	1120	
Asp Asn Ser Arg Val Val Pro His Asp Glu Ile Val Arg Ala Ala Lys				
	1125	1130	1135	
Glu Ala Asn Ile His Pro Phe Ile Glu Thr Leu Pro Gln Lys Tyr Asn				
	1140	1145	1150	
Thr Arg Val Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln				
	1155	1160	1165	
Val Val Val Val Val Val Val Val Val Val Val Val Val Val Val Val				

770		775		780
Lys Met Phe Met Thr Gly Phe Ser Gly Asp Leu Glu Ala Ala His Ala				
785		790		800
Lys Gly Thr Gln Leu Ala Gly Glu Ala Ile Ala Asn Val Arg Thr Val				
	805		810	815
Ala Ala Phe Asn Ser Glu Ala Lys Ile Val Arg Leu Tyr Thr Ala Asn				
	820		825	830
Leu Glu Pro Pro Leu Lys Arg Cys Phe Trp Lys Gly Gln Ile Ala Gly				
	835		840	845
Ser Gly Tyr Gly Val Ala Gln Phe Cys Leu Tyr Ala Ser Tyr Ala Leu				
	850		855	860
Gly Leu Trp Tyr Ala Ser Trp Leu Val Lys His Gly Ile Ser Asp Phe				
865		870		875
Ser Lys Thr Ile Arg Val Phe Met Val Leu Met Val Ser Ala Asn Gly				
	885		890	895
Ala Ala Glu Thr Leu Thr Leu Ala Pro Asp Phe Ile Lys Gly Gly Gln				
	900		905	910
Ala Met Arg Ser Val Phe Glu Leu Leu Asp Arg Lys Thr Glu Ile Glu				
	915		920	925
Pro Asp Asp Pro Asp Thr Thr Pro Val Pro Asp Arg Leu Arg Gly Glu				
	930		935	940
Val Glu Leu Lys His Ile Asp Phe Ser Tyr Pro Ser Arg Pro Asp Ile				
945		950		955
Gln Ile Phe Arg Asp Leu Ser Leu Arg Ala Arg Ala Gly Lys Thr Leu				
	965		970	975
Ala Leu Val Gly Pro Ser Gly Cys Gly Lys Ser Ser Val Ile Ser Leu				
	980		985	990
Ile Gln Arg Phe Tyr Glu Pro Ser Ser Gly Arg Val Met Ile Asp Gly				
	995		1000	1005
Lys Asp Ile Arg Lys Tyr Asn Leu Lys Ala Ile Arg Lys His Ile Ala				
	1010		1015	1020
Ile Val Pro Gln Glu Pro Cys Leu Phe Gly Thr Thr Ile Tyr Glu Asn				
1025		1030		1035
Ile Ala Tyr Gly His Glu Cys Ala Thr Glu Ala Glu Ile Ile Gln Ala				
	1045		1050	1055
Ala Thr Leu Ala Ser Ala His Lys Phe Ile Ser Ala Leu Pro Glu Gly				
	1060		1065	1070
Tyr Lys Thr Tyr Val Gly Glu Arg Gly Val Gln Leu Ser Gly Gly Gln				
	1075		1080	1085
Tyr Ala Ala Ile Ala Ile Ala Ala Ala Leu Val Arg Lys Ala Gln Ile				
	1090		1095	1100
Met Leu Leu Arg Ala Ala Thr Ser Ala Leu Arg Ala Ala Ser Ala Arg				
1105		1110		1115
Ser Val Gln Glu Ala Leu Asp Gln Ala Cys Ser Gly Arg Thr Ser Ile				
	1125		1130	1135
Val Val Ala His Arg Leu Ser Thr Ile Arg Asn Ala His Val Ile Ala				
	1140		1145	1150
Val Ile Asp Asp Gly Lys Val Ala Glu His Gly Ser His Ser His Leu				
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Val Val Ile Val Tyr Arg Gly Thr Thr Ala Ala Met Ile Gln Leu Gln				

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<400> 8

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Met	His	Thr	Gly	Glu	Arg	Gln	Ala	Ala	Lys	Met	Arg	Arg	Ala	Tyr	Leu
		35					40					45			
Arg	Ser	Met	Leu	Ser	Gln	Asp	Ile	Ser	Leu	Phe	Asp	Thr	Glu	Ala	Ser
	50					55					60				
Thr	Gly	Glu	Val	Ile	Ser	Ala	Ile	Thr	Ser	Asp	Ile	Leu	Val	Val	Gln
65					70				75						80
Asp	Ala	Leu	Ser	Glu	Lys	Val	Gly	Asn	Phe	Leu	His	Tyr	Ile	Ser	Arg
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Phe	Ile	Ala	Gly	Phe	Ala	Ile	Gly	Phe	Thr	Ser	Val	Trp	Gln	Ile	Ser
		100					105						110		
Leu	Val	Thr	Leu	Ser	Ile	Val	Pro	Leu	Ile	Ala	Leu	Ala	Gly	Gly	Ile
	115						120					125			
Tyr	Ala	Phe	Val	Ala	Ile	Gly	Leu	Ile	Ala	Arg	Val	Arg	Lys	Ser	Tyr
	130					135					140				
Ile	Lys	Ala	Gly	Glu	Ile	Ala	Glu	Glu	Val	Ile	Gly	Asn	Val	Arg	Thr
145					150					155					160
Val	Gln	Ala	Phe	Thr	Gly	Glu	Glu	Arg	Ala	Val	Arg	Leu	Tyr	Arg	Glu
			165					170						175	
Ala	Leu	Glu	Asn	Thr	Tyr	Lys	Tyr	Gly	Arg	Lys	Ala	Gly	Leu	Thr	Lys
			180					185					190		
Gly	Leu	Gly	Leu	Gly	Ser	Met	His	Cys	Val	Leu	Phe	Leu	Ser	Trp	Ala
	195					200						205			
Leu	Leu	Val	Trp	Phe	Thr	Ser	Val	Val	Val	His	Lys	Asp	Ile	Ala	Asp
	210					215						220			
Gly	Gly	Lys	Ser	Phe	Thr	Thr	Met	Leu	Asn	Val	Val	Ile	Ala	Gly	Leu
225					230					235					240
Ser	Leu	Gly	Gln	Ala	Pro	Asn	Ile	Ser	Ala	Phe	Val	Arg	Ala	Lys	
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Ala	Ala	Ala	Tyr	Pro	Ile	Phe	Lys	Met	Ile	Gln	Arg	Asn	Thr	Val	Thr
		260					265						270		
Lys	Thr	Ser	Ala	Lys	Ser	Gly	Arg	Lys	Leu	Gly	Lys	Val	Asp	Gly	His
	275					280							285		
Ile	Gln	Phe	Lys	Asp	Ala	Thr	Phe	Ser	Tyr	Pro	Ser	Arg	Pro	Asp	Val
	290				295							300			
Val	Ile	Phe	Asp	Arg	Leu	Asn	Leu	Ala	Ile	Pro	Ala	Gly	Lys	Ile	Val
305					310					315					320
Ala	Val	Thr	Ala	Glu	Gln	Ala	Thr	Ala	Pro	Thr	Val	Ile	Arg	Leu	

Ile	Leu	Tyr	Gly	Lys	Asp	Asp	Ala	Thr	Ala	Glu	Glu	Ile	Thr	Arg	Ala
385					390					395					400
Ala	Lys	Leu	Ser	Glu	Ala	Ile	Ser	Phe	Ile	Asn	Asn	Leu	Pro	Glu	Gly
				405					410					415	
Phe	Glu	Thr	Gln	Val	Gly	Glu	Arg	Gly	Ile	Gln	Leu	Ser	Gly	Gly	Gln
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Lys	Gln	Arg	Ile	Ala	Ile	Ser	Arg	Ala	Ile	Val	Lys	Asn	Pro	Ser	Ile
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Leu	Leu	Leu	Asp	Glu	Ala	Thr	Ser	Ala	Leu	Asp	Ala	Glu	Ser	Glu	Lys
	450					455					460				
Ser	Val	Gln	Glu	Ala	Leu	Asp	Arg	Val	Met	Val	Gly	Arg	Thr	Thr	Val
465					470					475					480
Val	Val	Ala	His	Arg	Leu	Ser	Thr	Val	Arg	Asn	Ala	Asp	Ile	Ile	Ala
			485						490					495	
Val	Val	His	Glu	Gly	Lys	Ile	Val	Glu	Phe	Gly	Asn	His	Glu	Asn	Leu
		500						505					510		
Ile	Ser	Asn	Pro	Asp	Gly	Ala	Tyr	Ser	Ser	Leu	Leu	Arg	Leu	Gln	Glu
	515					520							525		
Thr	Ala	Ser	Leu	Gln	Arg	Asn	Pro	Ser	Leu	Asn	Arg	Thr	Leu	Ser	Arg
	530					535						540			
Pro	His	Ser	Ile	Lys	Tyr	Ser	Arg	Glu	Leu	Ser	Arg	Thr	Arg	Ser	Ser
545					550					555					560
Phe	Cys	Ser	Glu	Arg	Glu	Ser	Val	Thr	Arg	Pro	Asp	Gly	Ala	Asp	Pro
			565						570					575	
Ser	Lys	Lys	Val	Lys	Val	Thr	Val	Gly	Arg	Leu	Tyr	Ser	Met	Ile	Arg
		580						585					590		
Pro	Asp	Trp	Met	Tyr	Gly	Val	Cys	Gly	Thr	Ile	Cys	Ala	Phe	Ile	Ala
	595					600						605			
Gly	Ser	Gln	Met	Pro	Leu	Phe	Ala	Leu	Gly	Val	Ser	Gln	Ala	Leu	Val
	610					615					620				
Ser	Tyr	Tyr	Ser	Gly	Trp	Asp	Glu	Thr	Gln	Lys	Glu	Ile	Lys	Lys	Ile
625					630					635					640
Ala	Ile	Leu	Phe	Cys	Cys	Ala	Ser	Val	Ile	Thr	Leu	Ile	Val	Tyr	Thr
			645						650					655	
Ile	Glu	His	Ile	Cys	Phe	Gly	Thr	Met	Gly	Glu	Arg	Leu	Thr	Leu	Arg
	660							665					670		
Val	Arg	Glu	Asn	Met	Phe	Arg	Ala	Ile	Leu	Lys	Asn	Glu	Ile	Gly	Trp
	675						680					685			
Ile	Asp	Glu	Val	Asp	Asn	Thr	Ser	Ser	Met	Leu	Ala	Ser	Arg	Leu	Glu
	690					695									
Ser	Asp	Ala	Thr	Leu	Leu	Lys	Thr	Ile	Val	Val	Asp	Arg	Ser	Thr	Ile
705						710					715				720
Leu	Leu	Gln	Asn	Leu	Gly	Leu	Val	Val	Thr	Ser	Phe	Ile	Ile	Ala	Phe
			725						730					735	
Ile	Leu	Asn	Trp	Arg	Leu	Thr	Leu	Val	Val	Leu	Ala	Thr	Tyr	Pro	Leu
	740							745					750		
Val	Ile	Ser	Gly	His	Ile	Ser	Glu	Lys	Leu	Phe	Met	Gln	Gly	Tyr	Gly
	755						760					765			
Gly	Asp	Leu	Asn	Lys	Ala	Tyr	Leu	Lys	Ala	Asn	Met	Leu	Ala	Gly	Ala
	770						775								

Protein Data Bank, Brookhaven National Laboratory, Upton, New York 11973

835	840	845
Met Asp Lys Gly Leu Ala Gly Phe Lys Ser Val Met Lys Thr Phe Met		
850	855	860
Val Leu Ile Val Thr Ala Leu Ala Met Gly Glu Thr Leu Ala Leu Ala		
865	870	875
Pro Asp Leu Leu Lys Gly Asn Gln Met Val Ala Ser Val Phe Glu Ile		880
885	890	895
Leu Asp Arg Lys Thr Gln Ile Val Gly Glu Thr Ser Glu Glu Leu Asn		
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Asn Val Glu Gly Thr Ile Glu Leu Lys Gly Val His Phe Ser Tyr Pro		
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965	970	975
Val Met Ile Glu Gly Lys Asp Ile Lys Lys Leu Asp Leu Lys Ala Leu		
980	985	990
Arg Lys His Ile Gly Leu Val Gln Gln Glu Pro Ala Leu Phe Ala Thr		
995	1000	1005
Thr Ile Tyr Glu Asn Ile Leu Tyr Gly Asn Glu Gly Ala Ser Gln Ser		
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Glu Val Val Glu Ser Ala Met Leu Ala Asn Ala His Ser Phe Ile Thr		
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Ser Leu Pro Glu Gly Tyr Ser Thr Lys Val Gly Glu Arg Gly Val Gln		
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Met Ser Gly Gly Gln Arg Gln Arg Ile Ala Ile Ala Arg Ala Ile Leu		
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Lys Asn Pro Ala Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala Leu Asp		
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Val Glu Ser Glu Arg Val Val Gln Gln Ala Leu Asp Arg Leu Met Ala		
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Ser His Arg Lys Leu Val Leu Asn Lys Ser Gly Pro Tyr Phe Lys Leu		
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Leu Ser Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu		
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(212) PPT

(213) Artificial Sequence

(220)

(214) synthetic consensus sequence

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Glu	Leu	Gly	Ala	Ile	Arg	Thr	Val	Ile	Ala	Phe	Gly	Gly	Gln	Lys	Glu
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			260					265						270	
Ser	Val	Gly	Gln	Ala	Ala	Pro	Ile	Asp	Ala	Phe	Ala	Asn	Ala	Arg	Gly
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His	Phe	Ser	Tyr	Pro	Ser	Arg	Glu	Val	Lys	Ile	Leu	Lys	Gly	Leu	Asn
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Val Gly Thr Val Cys Ala Ile Ile Asn Gly Leu Gln Pro Phe Ala Ile					
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Glu Ala Ile Glu Asn Ile Arg Thr Val Val Ser Leu Thr Glu Lys Phe					
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Glu Ser Met Tyr Leu Pro Tyr Arg Asn Ser Val Arg Lys Ala His Ile					
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Tyr Gly Ile Thr Phe Ser Ile Ser Gln Ala Met Tyr Phe Ser Tyr Ala					
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Ser Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Leu Ser Ala Ala Leu					
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Leu Glu Gly Val Phe Val Phe Asn Tyr Pro Thr Arg Pro Asp Val Pro					
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Glu Arg Phe Tyr Asp Pro Leu Ala Gly Lys Val Leu Leu Asp Gly Lys					
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Val Ser Gln Gln Trp Ile Leu Phe Asp Lys Ser Ile Ala Gln Asn Ile					
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Ala Tyr Gly Asp Asn Ser Arg Val Ser Asp Glu Ile Val Ala Ala Lys					
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Ala Asn Ile His Phe Ile Glu Thr Leu Pro Asp Lys Tyr Thr Arg Val					
865			870		875
Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala					
885			890		895
Val Ser Ala Asn Ala Ser Ile Asp Ile Leu Val Leu Leu Leu Asn Gln					

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